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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/961,094	09/24/2001	Teruzi Yamazaki	213800US0	5988

22850 7590 02/06/2003

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EXAMINER	
COOKE, COLLEEN P	
ART UNIT	PAPER NUMBER
1725	

DATE MAILED: 02/06/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/961,094	Applicant(s) YAMAZAKI ET AL.	
	Examiner Colleen P Cooke	Art Unit 1725	

-- The MAILING DATE of this c mmunication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 September 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Claim Rejections - 35 USC § 112

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites the limitation "the slurry" in line 3. There is insufficient antecedent basis for this limitation in the claim. It appears that this is meant to refer back to the slurry of claim 1, although the claim is currently not written as such. For the purposes of examination this limitation will be treated as requiring the slurry as claimed in claim 1, but correction will still be required to clarify this.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Lachman et al. (4657880).

Regarding claims 1 and 3, Lachman et al. teaches mixing a porous oxide powder, which may be a zeolite such as Silicalite (Column 3, lines 47-57) with any of a number of known binders, such as poly(methyl methacrylate) (Column 4, lines 25-33 and 39) and a solvent to form a slurry (Column 4, lines 53-56).

Regarding claim 2, Silicalite is a hydrophobic zeolite.

Regarding claim 5, Lachman et al. teaches it is preferred to use 5-15 parts by weight of binder (Column 4, lines 19-50).

Regarding claims 6 and 7, because the slurry is the same as that which is claimed, it would have the same viscosity and pH.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lachman et al. (4657880), in view of Guile et al. (5716899)

Lachman et al. teaches the zeolite slurry as described with respect to claim 1 above. Lachman et al. is not specific as to the amount of solvent added to make the slurry and as to the zeolite content of the slurry.

Guile et al. teaches a zeolite slurry to be used for coating a carrier, where the slurry has a solids content of about 25%-40% (Column 8, lines 19-27) and a specific example of a zeolite slurry having approximately 35 wt% zeolite (Example 7 in Column 11, lines 23-30).

Lachman et al. and Guile et al. are analogous art because they are from the same field of endeavor, which is zeolite slurry formulation for coating a carrier. It would have been obvious to modify the slurry of Lachman et al. by using the solids loading taught by Guile et al. because

Guile et al. teaches that various compositions of the slurries can vary depending on the materials (Column 8, lines 24-27).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lachman et al. (4657880), in view of Addiego (6004896)

Lachman et al. teaches the zeolite slurry as described with respect to claim 1 above. Lachman et al. is not specific as to the amount of solvent added to make the slurry and as to the zeolite content of the slurry.

Addiego teaches a zeolite slurry to be used for coating a carrier, where the solids are 85% zeolite and the water to solids ratio is between 1:1 and 1.5:1 (Column 4, lines 64-67).

Lachman et al. and Addiego are analogous art because they are from the same field of endeavor, which is zeolite slurry formulation for coating a carrier. It would have been obvious to modify the slurry of Lachman et al. by using the solids loading taught by Addiego because this slurry is ideal to be used as a washcoat as taught by Addiego.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beckmeyer et al. (5330945), in view of Lachman et al. (4657880).

Beckmeyer et al. is concerned with treating diesel engine exhaust (Column 1, lines 47-49) by using an additional silica coating over the zeolite coating to inhibit diffusion of gases into the zeolite layer. Beckmeyer et al. teaches applying a zeolite washcoat to a flow-through monolith and applying a colloidal silica over the applied washcoat (Column 3, lines 11-21). More specifically, Beckmeyer et al. teaches applying the washcoat in a thin layer and then drying

it in air (Column 5, lines 61-65). Once coated, the monolith is calcined (Column 5, lines 67-68). Although Beckmeyer et al. does not specifically teach a separate step of drying the second layer, it would not only be obvious to do so, by the calcining step would dry this layer. Beckmeyer et al. does not teach the specific slurry as claimed in claim 1.

Lachman et al. teaches the zeolite slurry as described with respect to claim 1 above.

Beckmeyer et al. and Lachman et al. are analogous art because they are from the same field of endeavor, which is treatment of engine exhaust by zeolite catalysts. It would have been obvious to modify the method of Backmeyer et al. by using the zeolite slurry of Lachman et al. because Lachman et al. teaches that the slurry is for use in a monolithic support well suited for catalyzing the conversion of truck or automotive gasses to less noxious forms (Column 7, lines 21-32).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beckmeyer et al. (5330945), in view of Lachman et al. (4657880), and further in view of Kuma (5194414).

Beckmeyer et al. and Lachman et al. teach the method of making a zeolite-carrying element as described with respect to claim 8 above. Beckmeyer et al. teaches a catalytic converter in a support such as an extruded ceramic or corrugated metal monolith (Column 1, lines 51-55). Beckmeyer et al. does not teach using a carrier of inorganic fiber paper.

Kuma teaches a catalyst carrier of inorganic fiber paper (Column 2, lines 7-11) which is shaped into a honeycomb structure (Column 2, lines 17-21).

Beckmeyer et al., Lachman et al., and Kuma are analogous art because they are from the same field of endeavor, which is manufacture of catalyst carriers and coatings thereof. It would

have been obvious to modify the method of Beckmeyer et al. by using an inorganic fiber paper for the monolith to be coated because Kuma teaches this monolith is advantageous because of the large quantity of catalyst particles it can be impregnated with (Columns 1 and 2, lines 54-58 and 30-41 respectively).

Conclusion

Any inquiry concerning this or earlier communications from the examiner should be directed to Colleen Cooke, whose telephone number is 703-305-1136. She can normally be reached Monday-Thursday from 7:15-5:45pm.

If attempts to reach the examiner by telephone are unsuccessful, her supervisor, Thomas Dunn, can be reached at 703-308-3318. The official fax number for the organization where this application or proceeding is assigned is 703-305-6078. The unofficial fax number for this examiner is 703-746-3048.

Any inquiry of a general nature relating to the status of this application or proceeding should be directed to the receptionist, whose telephone number is 703-308-0661.

CPC 1/30/2003

TOM DUNN
SUPERVISORY PATENT EXAMINER
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